

WHAT IS CLAIMED IS:

1. An organic electroluminescence display device, comprising:
 - a substrate including an emission region and a non-emission region;
 - a first electrode on the substrate;
 - a buffer layer on the first electrode, the buffer layer corresponding to the non-emission region;
 - a partition wall on the buffer layer, the partition wall including a polymer;
 - a first carrier transporting layer on the substrate including the partition wall, the first carrier transporting layer having a hydrophilic portion corresponding to the emission region and a hydrophobic portion corresponding to the non-emission region;
 - an emissive layer on the first carrier transporting layer, the emissive layer corresponding to the hydrophilic portion;
 - a second carrier transporting layer on the emissive layer; and
 - a second electrode on the second carrier transporting layer.
2. The device according to claim 1, wherein the hydrophilic portion of the first carrier transporting layer is formed by an oxygen plasma treatment.

3. The device according to claim 2, wherein the hydrophobic portion of the first carrier transporting layer is formed by using a mold made of a silicon rubber.

4. The device according to claim 1, wherein the first electrode and the second electrode function as an anode and a cathode, respectively.

5. The device according to claim 1, wherein the emissive layer is formed by a coating method using one of a nozzle apparatus and a roller.

6. The device according to claim 5, wherein the emissive layer is formed by using a solution including a water-soluble polymer emissive material.

7. The device according to claim 1, wherein the first carrier transporting layer includes a hole injection layer and a hole transporting layer.

8. The device according to claim 7, wherein the hole transporting layer includes poly(3,4-ethylenedioxythiophene)-poly(styrene sulfonic acid).

9. The device according to claim 1, wherein the second carrier transporting layer includes an electron transporting layer and an electron injection layer.

10. The device according to claim 1, wherein the second carrier transporting layer covers the first carrier transporting layer.

11. A method of fabricating an organic electroluminescence display device, comprising:

forming a first electrode on a substrate including an emission region and a non-emission region;

forming a buffer layer on the first electrode, the buffer layer corresponding to the non-emission region;

forming a partition wall on the buffer layer, the partition wall including a polymer;

forming a first carrier transporting layer on the partition wall, the first carrier transporting layer covering the entire substrate including the partition wall;

treating the first carrier transporting layer with an oxygen plasma, thereby the first carrier transporting layer having hydrophilicity;

attaching a mold to the first carrier treated with the oxygen plasma, thereby the first carrier transporting layer corresponding to the non-emission region having hydrophobicity;

removing the mold from the first carrier transporting layer;

forming an emissive layer on the first carrier transporting layer using a coating method, the emissive layer corresponding to the emission region;

forming a second carrier transporting layer on the emissive layer; and

forming a second electrode on the second carrier transporting layer.

12. The method according to claim 11, wherein attaching the mold to the first transporting layer treated with the oxygen plasma is accomplished for about 1 minute to 10 minutes at a temperature within a range of room temperature to about 100 degrees centigrade.

13. The method according to claim 11, wherein the mold includes one of polydimethylsiloxane, polyurethane rubber, and elastomer.

14. The method according to claim 13, wherein the mold includes polydimethylsiloxane and a hardening agent of about 10 wt.%.

15. The method according to claim 10, wherein the first and second electrodes function as an anode and a cathode, respectively.

16. The method according to claim 15, wherein the first electrode includes a transparent conductive material.

17. The method according to claim 15, wherein the second electrode includes a metallic material having a lower work function than the first electrode.
18. The method according to claim 11, wherein the mold has a flat surface contacting the first carrier transporting layer.
19. The method according to claim 11, wherein the emissive layer is formed by a coating method using one of a nozzle apparatus and a roller.
20. The method according to claim 19, wherein the emissive layer is formed by using a solution including a water-soluble polymer emissive material.
21. The method according to claim 11, wherein the first carrier transporting layer includes a hole injection layer and a hole transporting layer.
22. The method according to claim 21, wherein the hole transporting layer includes poly(3,4-ethylenedioxythiophene)-poly(styrene sulfonic acid).
23. The method according to claim 11, wherein the second carrier transporting layer includes an electron transporting layer and an electron injection layer.

24. The method according to claim 23, wherein the second carrier transporting layer covers the entire substrate including the emissive layer.

25. The method according to claim 11, wherein the second electrode is formed by a deposition method.

26. The method according to claim 25, wherein forming the second electrode includes forming a metal layer on the second carrier transporting layer corresponding to the non-emissive layer, the metal layer disconnected from the second electrode.